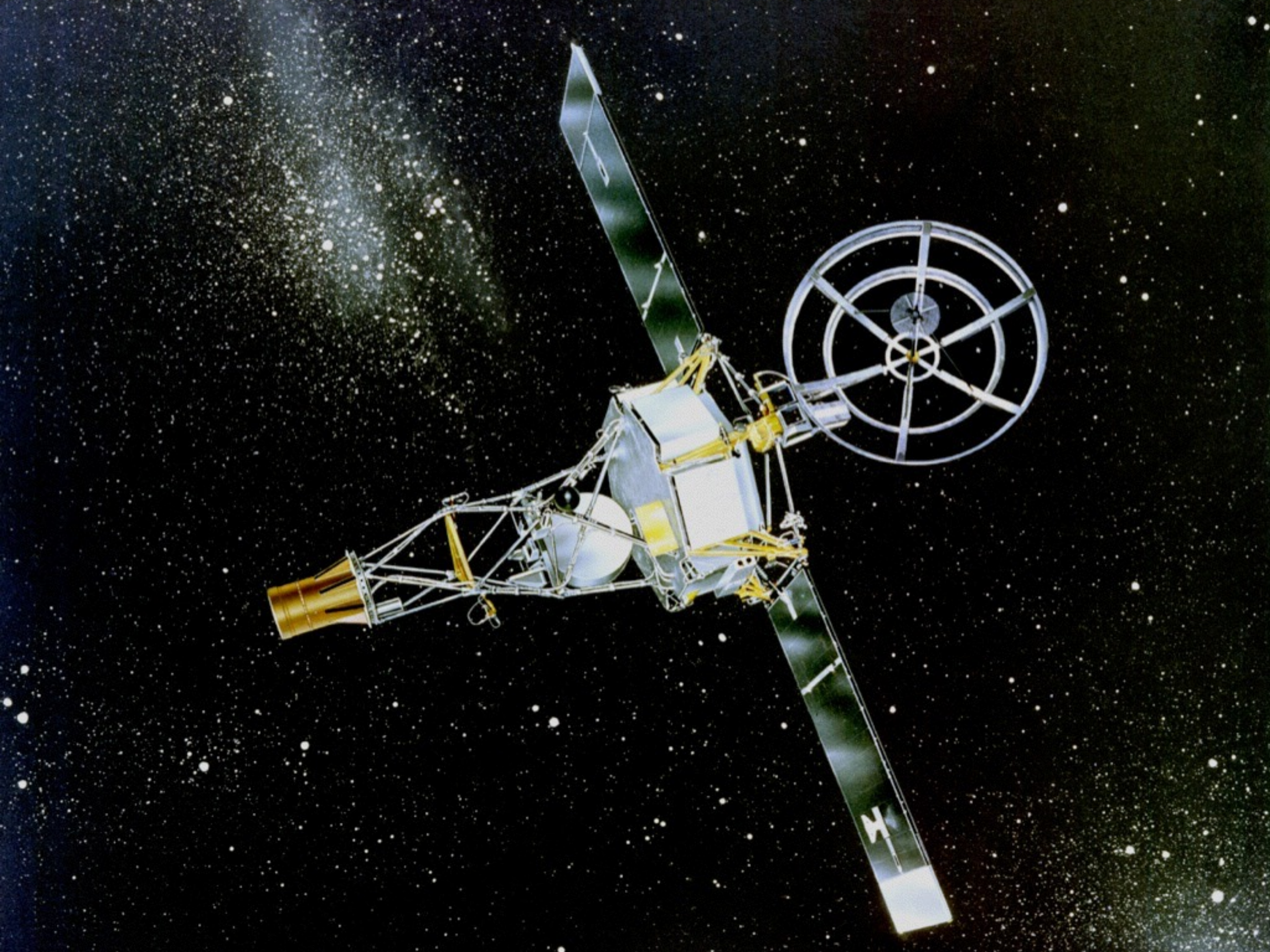
CosmoQuest X

Learning Science & Building Community around Citizen Science Collaboration



Earth to Scale

Jet Propulsion Laboratory | California Institute of Technology

DEEP SPACE NETWORK *NOW*

LAST UPDATED: OCT 26 8:40 PM (UTC)

DSN home

DAWN MER1 M01O M01O MRO

MADRID

OCT 26
10:40 PM

63 65 54 55

VGR1 ACE VGR1 VGR1 CAS

GOLDSTONE

OCT 26
1:40 PM

14 15 24 25 26

STA THC SOHO ORX GBRA

CANBERRA

OCT 27
7:40 AM

43 45 34 35 36

TARGET

DAWN

VIEW ANTENNA | VIEW SPACECRAFT | VIEW WORLD MAP

DAWN

SPACECRAFT

NAME
Dawn

RANGE
-

ROUND-TRIP LIGHT TIME
-

ANTENNA

NAME
DSS 65

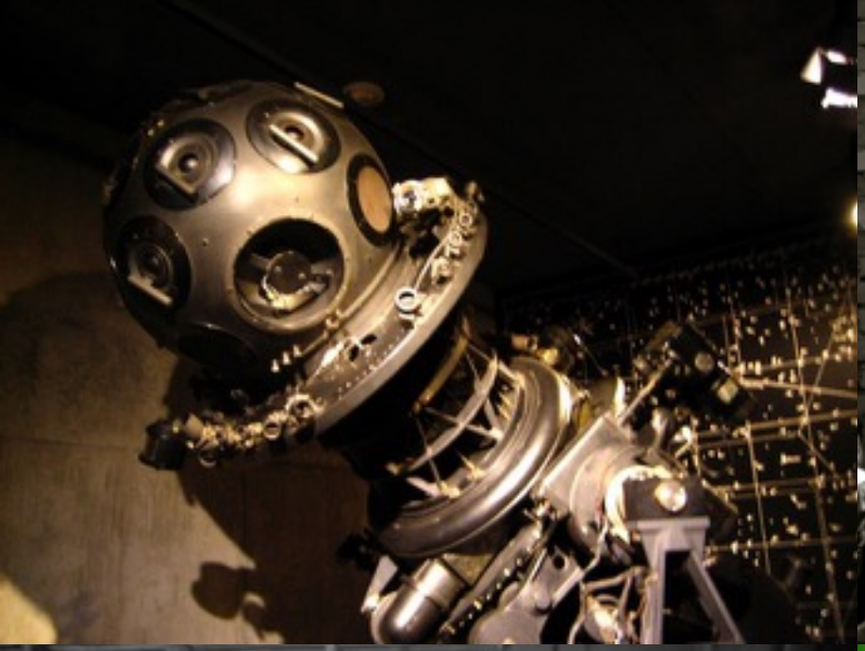
AZIMUTH
-

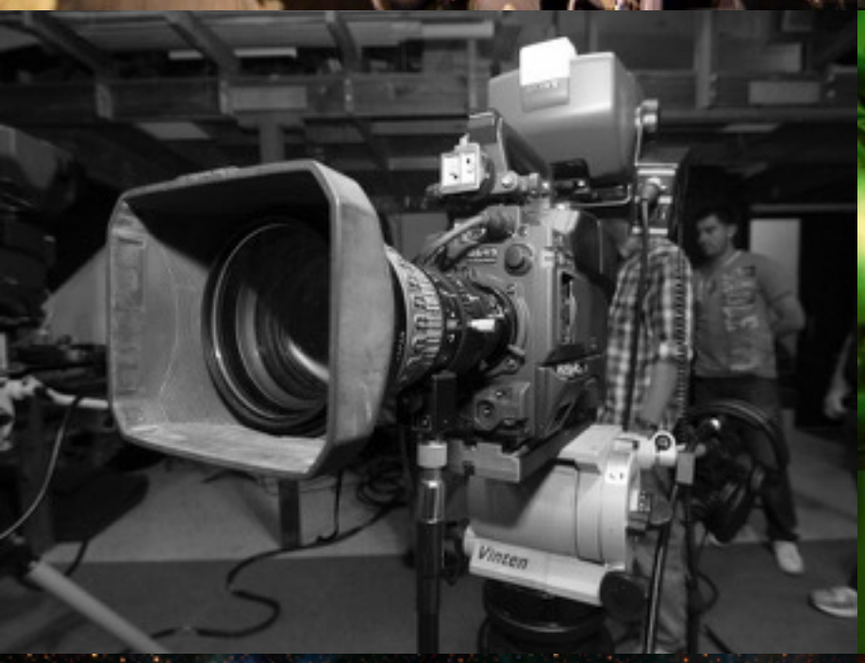
ELEVATION
-

WIND SPEED
0.00 km/hr


HELP
WANTED


discover
explore
learn



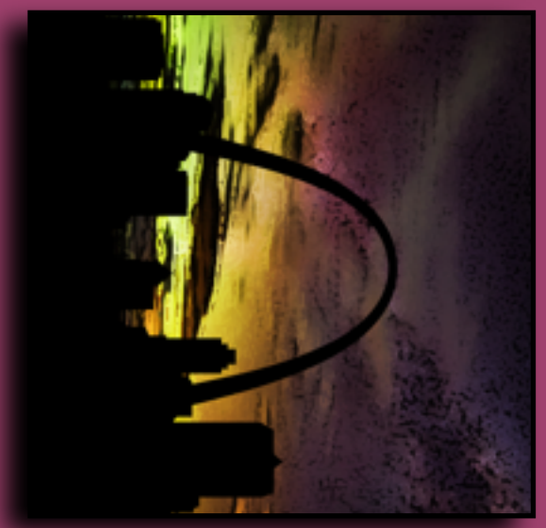



ARTISTS SPACE


CosmoQuest X
.org

Community Building

Guerilla Science



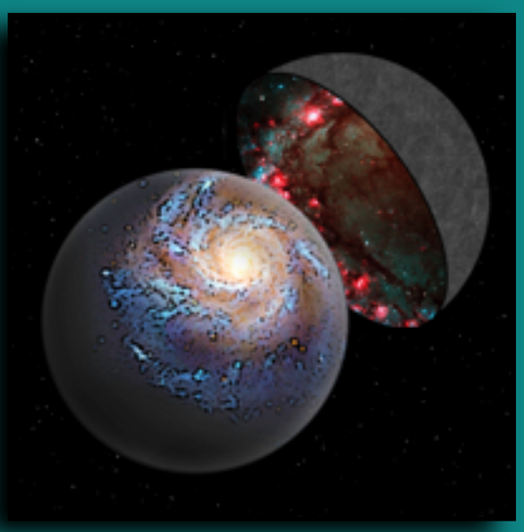
Citizen Science

365 Days of Astronomy

CosmoQuest

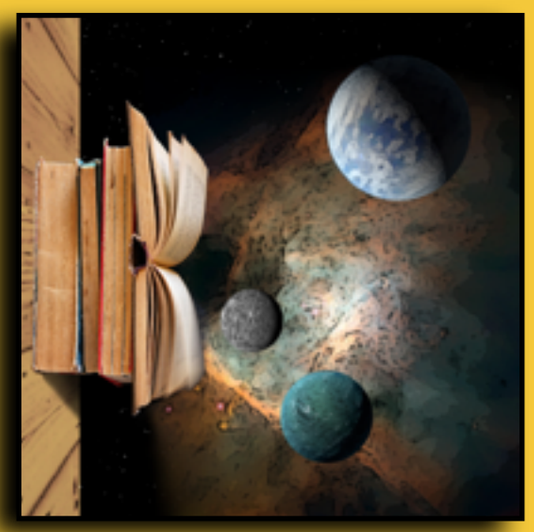
S-ROSES & IDEASS Repo

Projected Science



CosmoAcademy

Educators' Zone



Citizen Science

Where would you like to explore today?

audience:

ages 10 & up

products:

CitizenScienceBuilder
TransientTracker
data products & simulations

activities:

citizen science portals (e.g. *Moon Mappers*)
small research grants program for citizen science

evaluation:

via peer review of science results, Interface Guru

funding:
NASA CAN, NASA CADET, OSIRIS-REx Contract

Robbins et al. proved your results on aggregate are comparable to the results of pros!

Tutorial

Do Activity

Comparison Images, Feedback

Research Published

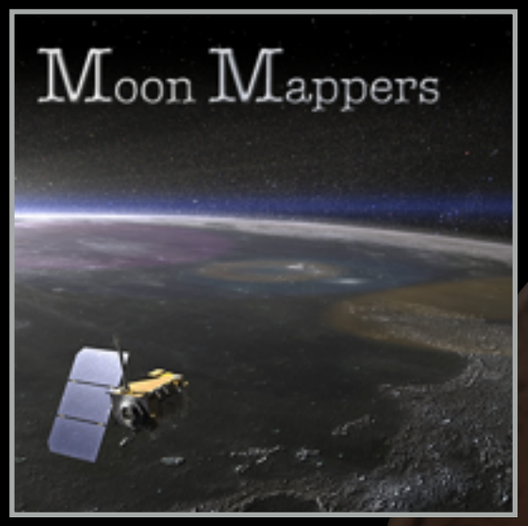
Robbins et al. proved your results on aggregate are comparable to the results of pros!

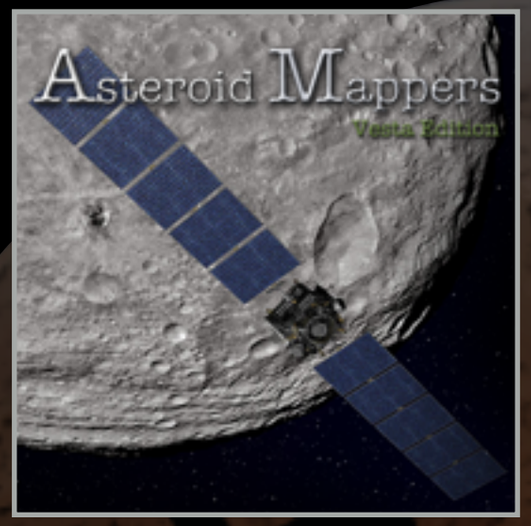
Peer-reviewed research produced by:

- MoonMappers - demonstrated accurate crater mapping
- Ice Investigators - Aided discovery of KBOs for NH

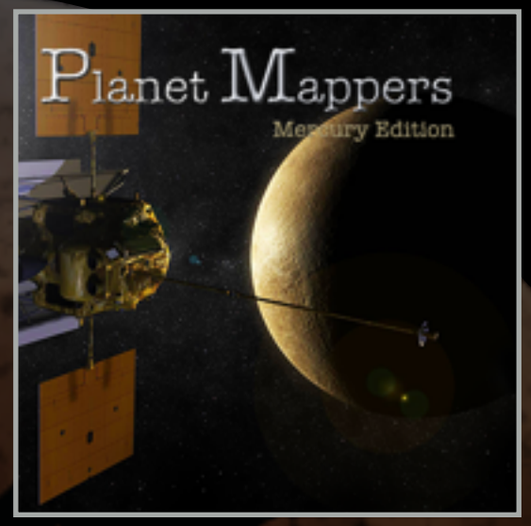
Discovered problem: *Researchers can mentor in spare time, but require funding for the efforts needed to publish!*

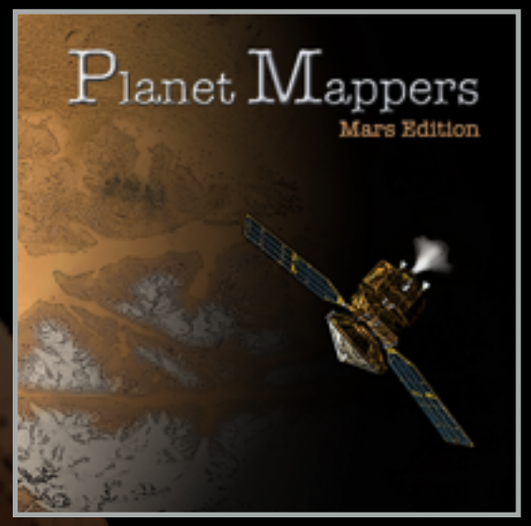
Complete





Need Curricula *(to complete in 2016)*





Pre-Selected

- Planet Builder (Q4 2016)
- Earth Mappers: Image Detective (Q3 2016)
- Dark Energy Explorer (Q1 2017)
- Asteroid Mappers: Bennu (2020)

Timeline

- Jun, RFP announced
- Sep, proposals due
- Jan, announce new programs

Student-ROSES

Exploring from the Earth to Beyond the Solar System

audience:

middle & high school

products:

Science Fair Research Guide
IDEASS repository
Mentors' Bureau

activities:

regional science fair training
subject matter expert training

evaluation:

participation numbers, duration of engagement, surveys

funding:

NASA CAN

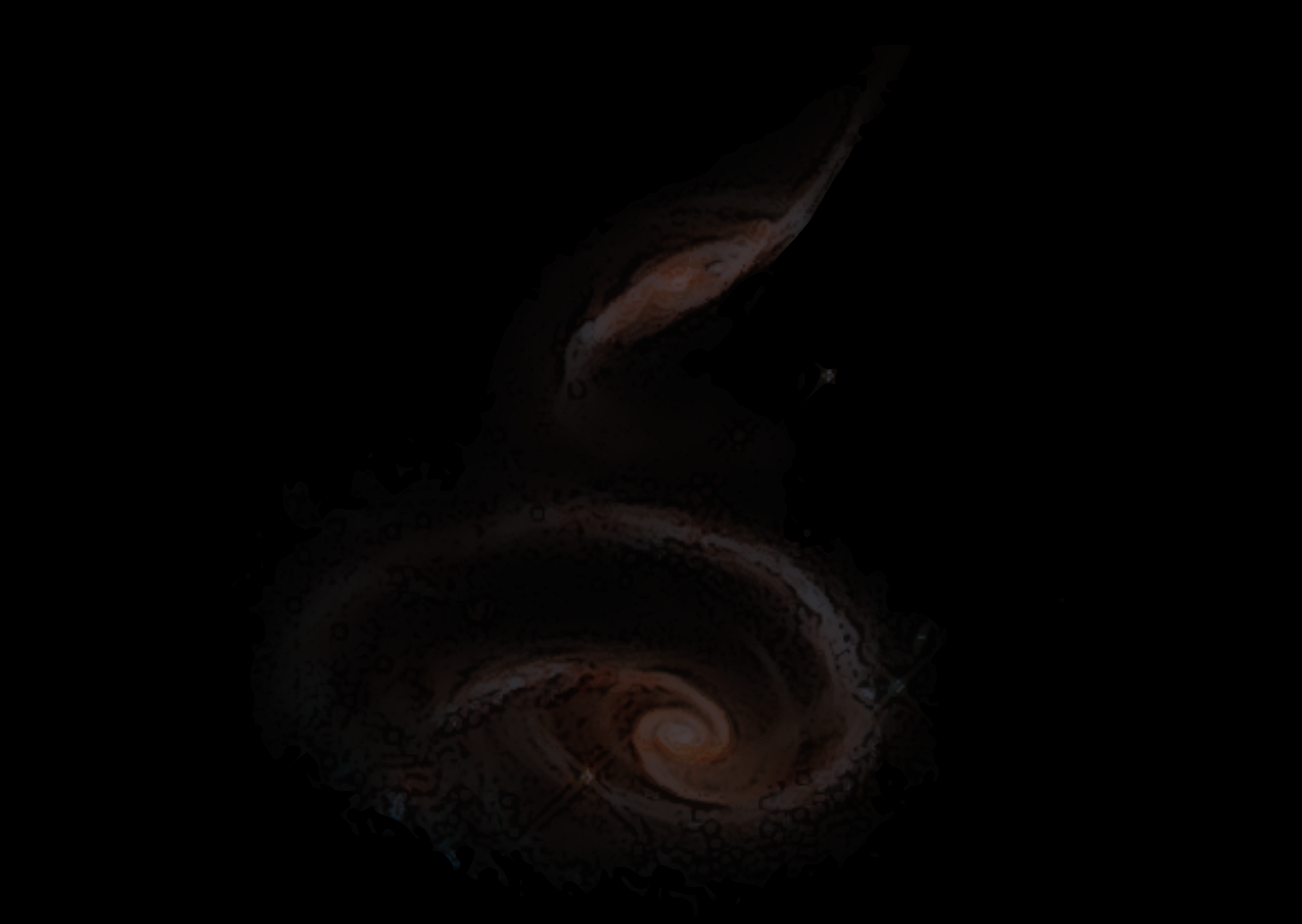
Henry Lin won $50k in 2013 with an Astrophysics project!

Pre-Selected

- Southern Illinois (2016)
- Northern Arizona (2016)

Timeline

- Mar, call for applications
- Jun, applications due
- Aug, announce selections



Educators' Zone

Learning thru Guided Inquiry & Authentic Investigations

audience:

formal & informal educators

products:

classroom curricula paired with citizen science
explanatory videos of activities

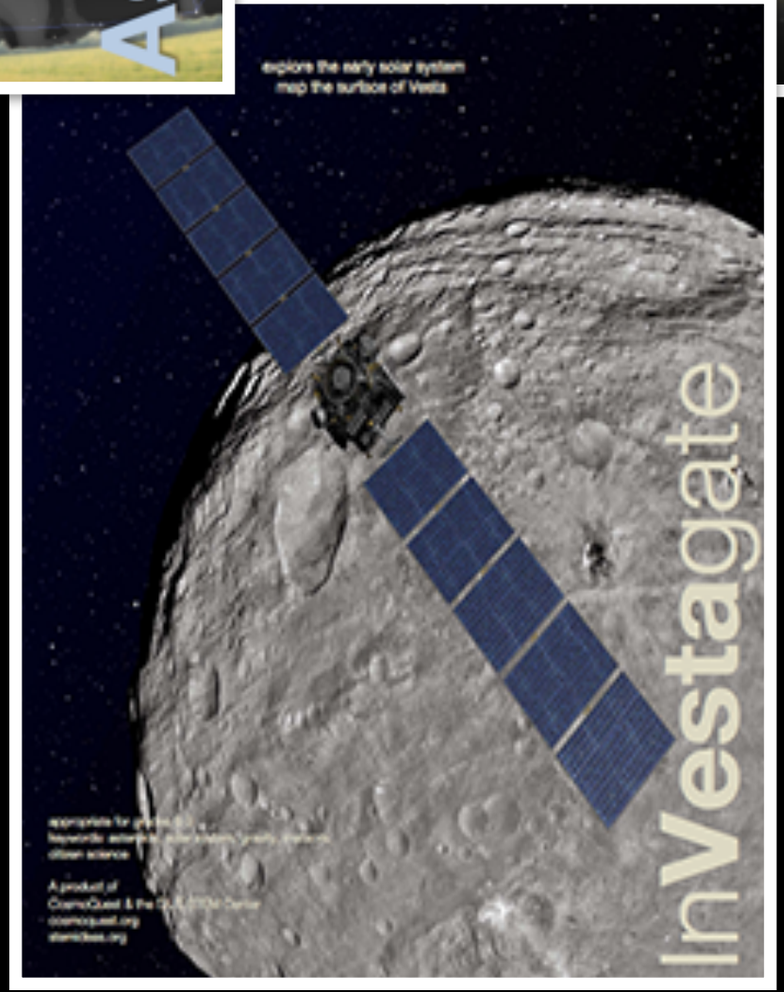
activities:

master teacher summer institute
regional teacher professional development
ongoing online PD / community building

evaluation:

external evaluators (McREL), internal research

funding:
NASA CAN, Patreon



Showcasing Your Materials

CosmoAcademy

Expert led Short Courses with Big Content & Small Class Sizes

audience:
life-long learners

products:
NA

activities:
SME Training
Online classes by SMEs

evaluation:
external evaluators (McREL), internal research

funding:
NASA CAN, student tuition

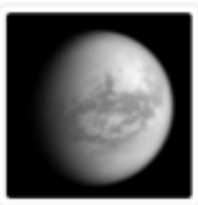
CosmoQuest | Do Science | Media | Teach and Learn | Community | Log In/ Register

CosmoAcademy

ABOUT | MY ACCOUNT | LOG OUT

Open for Enrollment

What would you like to learn today?



CQX114: The inner planets (& Titan)

In this class, we'll compare and contrast the interiors, geology, atmospheres, and magnetic fields of the inner planets, and the honorary moon Titan.

Planetary Science

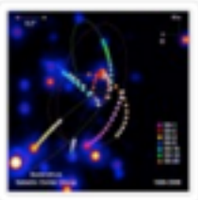
VIEW COURSE

CQX017: The Dark Side of the Universe

New Meeting Time! In this class, we'll talk about the evidence for dark matter, our best theories about the nature of the "dark side," and efforts to discover more about dark matter and dark energy.

Cosmology

VIEW COURSE



CQX201: Gravity and Orbits

This class introduces Newtonian gravity, the description of the force of attraction between two masses, that describes orbits from satellites to stars.

Techniques

VIEW COURSE

CQX111: Asteroids: Observations, Meteorites, & Missions

We'll cover optical, infrared, and radar techniques for characterizing asteroids, both near-Earth and in the main asteroid belt, and also learn about meteorites.

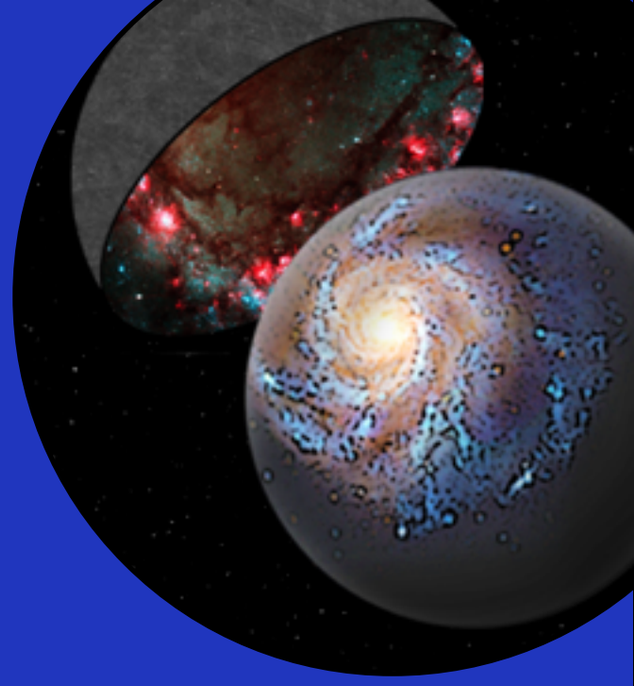
Planetary Science

VIEW COURSE

What do you have to teach?

ProjectedScience

Transforming visual data into science literacy thru Science on the Sphere, Dome, & Screen



audience:

all audiences

products:

image / video repository
sphere / dome shows

activities:

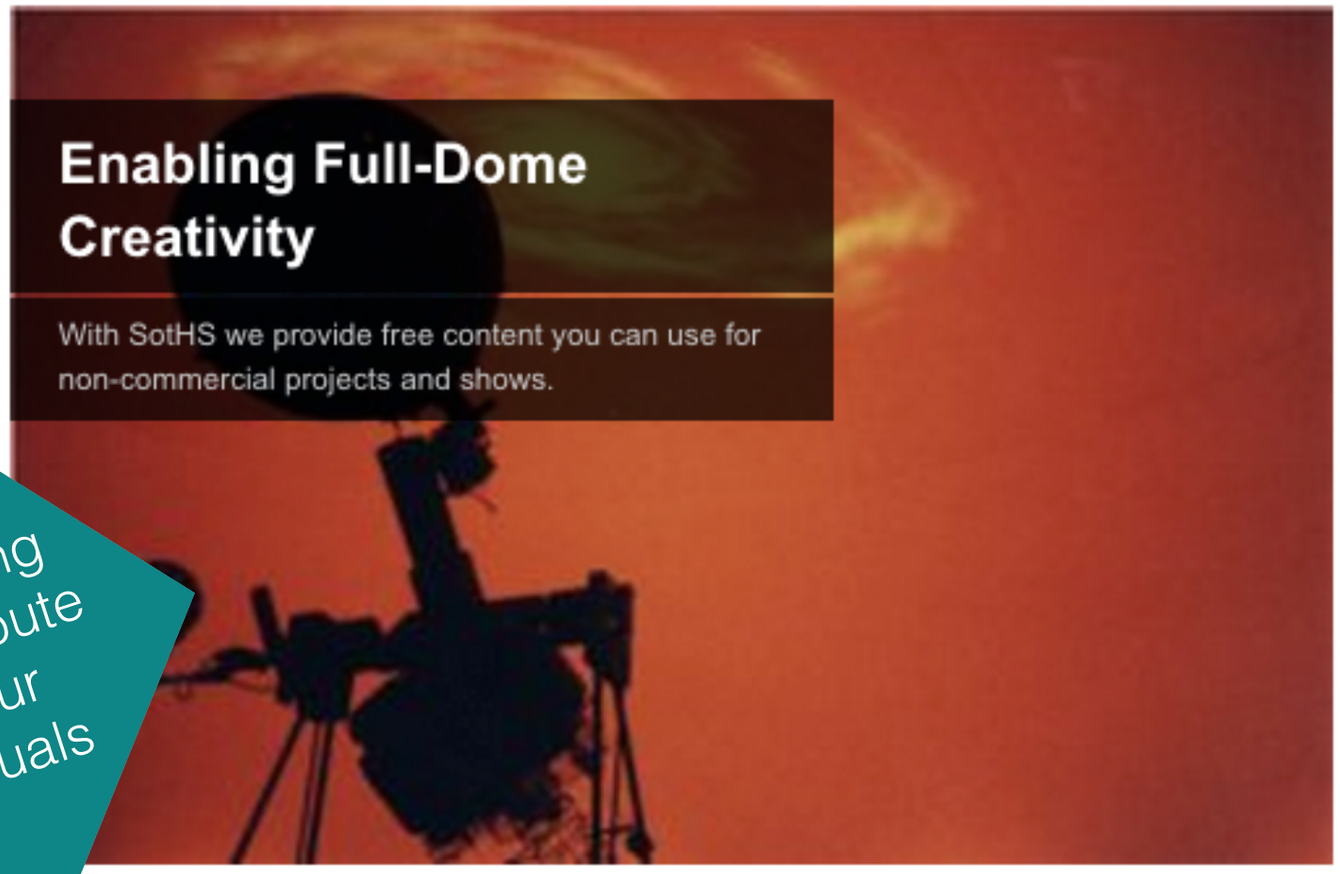
acquiring new images
rendering data products for dome/sphere
creating new shows

evaluation:

usage numbers, internal research

funding:
NASA CAN, HST EPO

Science on the Half Sphere



Helping Distribute Your Visuals

Featured Content

Subscribe / Connect

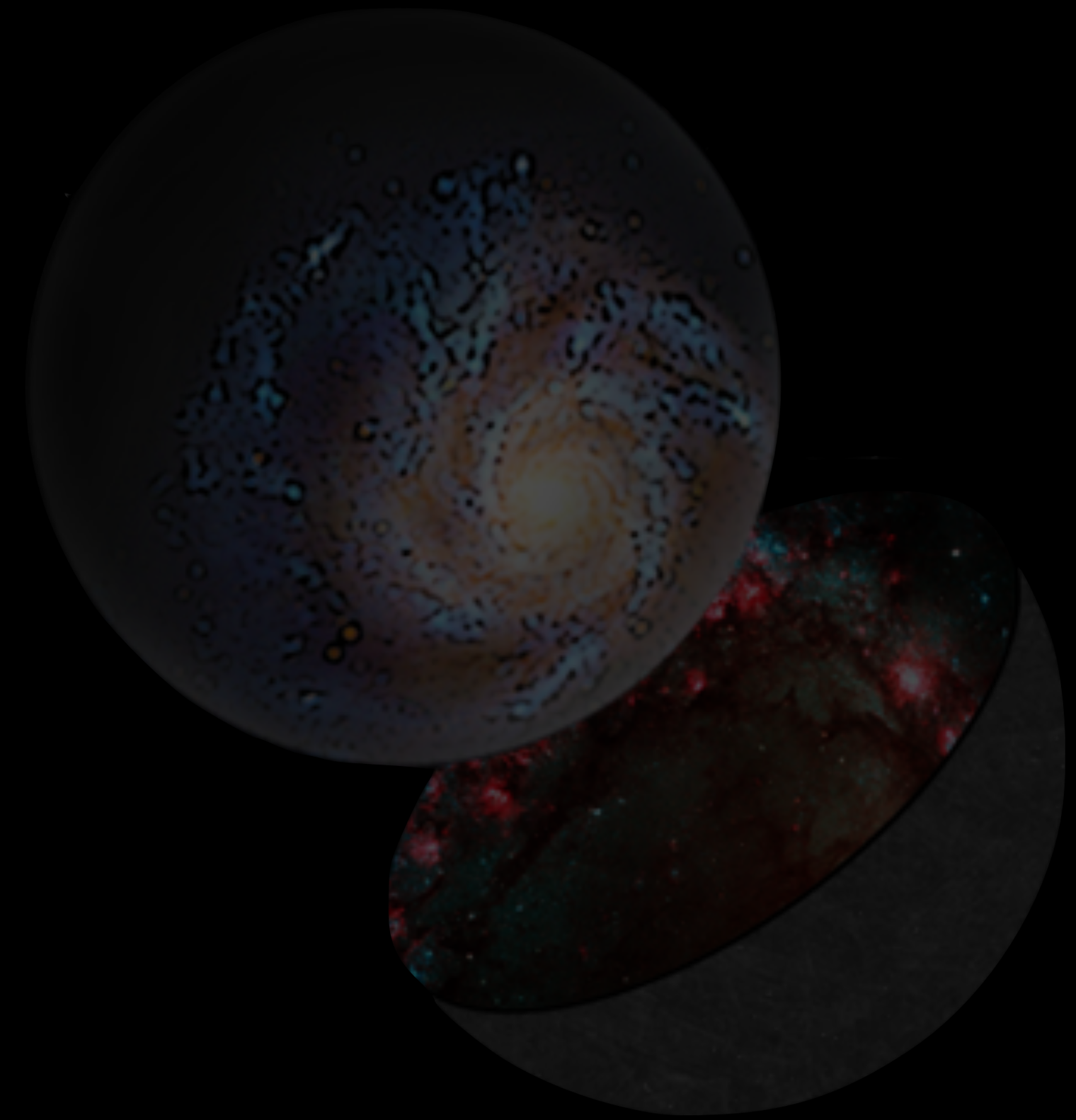
Find out about our upcoming shows and more.

LATEST

Mauna Kea – Fulldome (fisheye) timelapse video
DECEMBER 1, 2014

Mauna Kea – Fulldome (fisheye) images
DECEMBER 1, 2014

Planetarium Shows
DECEMBER 1, 2014



365 Days of Astronomy

Raising up the voices of Scientists & Science Lovers

audience:

all ages

products:

daily podcast
YouTube videos

activities:

recruiting & training new podcasters
hosting special events

evaluation:

submission of show to peer awards

funding:

donations

Partner Programs

AstroInfo

Ask a SPACEMAN! with Paul Sutter

Astronomy Cast

AWESOME ASTRONOMY

Cheap Astro

COSMIC PERSPECTIVE RADIO

CULTURAL ASTRONOMY 365 DAYS OF ASTRONOMY — Space Sciences Laboratory, University of California Berkeley

Astro Folklore 365 DAYS OF ASTRONOMY

GLOBE AT NIGHT

inspiring SCIENCE education hangouts

NOAO

MrWebb

365 DAYS OF ASTRONOMY Q&A

Realspace with Paul Sutter 365 DAYS OF ASTRONOMY

365 DAYS OF ASTRONOMY shalla's spaceCast

SPACE SCOOP

APOGEE Podcast 365 DAYS OF ASTRONOMY

WEEKLY SPACE HANGOUT 365 DAYS OF ASTRONOMY

Getting Your Voice Heard!

Science Chatter

Community

Better science thru communication, collaboration, & community

audience:
all ages*

products:
infographics
memes
webcomics

activities:
blogs, forums, social media

evaluation:
Google analytics, community surveys (led by Gay)

** different platforms target different age groups*

funding:
draws from all programs and volunteer efforts

Guerrilla Science

Taking science to the masses & highlighting science everywhere

audience:

all ages

products:

NA

activities:

stage shows, talks
booths
on-the-roam science

evaluation:

surveys, online tracking

funding:

donations, event funded

Partner Events

Global Astronomy Month

InOMN
International Observe the Moon Night

YURI'S NIGHT

Bringing science to science adjacent events

- Makers Faires
- Science Fiction / Fantasy Cons
- Science Film / Art Festivals
- Tech and Media Events like SXSW

What can we distribute for you?

Partner Institutions

- The STEM Center @SIUE, lead
- Astronomical Society of the Pacific
- InsightSTEM
- Interface Guru
- Lawrence Hall of Science @UC-Berkeley
- McREL International
- Planetary Science Institute
- McDonald Observatory @UT-Austin
- Ward-Beecher Planetarium @YSU

Community Partners

- Astronomers without Borders
- Astrosphere New Media Association
- Galileo Teacher Training Program
- International Sci. & Eng. Festival
- NASA Night Sky Network
- NASA Solar System Ambassadors
- St Louis Science Center
- S. Arizona Research, Sci. & Eng. Festival
- Universe Today
- Vatican Observatory

Mission & Facility Partners

- CADC
- Dawn
- Hobby-Eberly Telescope
- Lunar Reconnaissance Orbiter
- New Horizons
- MESSENGER
- OSIRIS-REx
- Vatican Observatory
- WFIRST

Advisors

- Jessie Antonellis, diversity consultant
- Matt Benjamin, U-Colorado
- Edna DeVore, SETI Institute
- Daniel Durda, SWRI
- Llewellyn Falco, software consultant
- Brenda Frye, U-Arizona (education)
- Maurice Henderson, Goddard
- Michelle Higgins, diversity consultant
- Gillian Krezoski, Palomar Observatory
- Peter Lake, iTelescope
- Robert Martin, Clean Coder
- Terry Menz, educator
- Chris Miller, software consultant
- Susan Reynolds Buttons, planetarium consultant
- Mike Simonsen, AAVSO
- Alessondra Springmann, U-Arizona (planetary)
- Brian Warner, minor planet consultant
- Ryan Wyatt, California Academy
- Padma Yanamandra-Fisher, STScI

Evaluators

- InterfaceGuru
- NASA evaluation team
- McREL International